

Bigelow H. J.

SCIENCE AND SUCCESS.

A

VALEDICTORY ADDRESS

DELIVERED TO THE

Medical Graduates of Harvard University,

AT THE

ANNUAL COMMENCEMENT,

WEDNESDAY, MARCH 9, 1859.

BY HENRY JACOB BIGELOW, M.D.

PROFESSOR OF SURGERY.

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1859.

BOSTON, MARCH 9th, 1859.

Prof. H. J. BIGELOW --

DEAR SIR :

AT a meeting of the Graduating Class, the undersigned were appointed a committee to request a copy of your address for publication.

Your obedient Servants,

J. T. G. NICHOLS,
F. H. KREBS,
C. H. BURBANK.

BOSTON, MARCH 10th, 1859.

GENTLEMEN :

It gives me great pleasure to accede to the request contained in your note of yesterday.

Your obedient Servant,

HENRY J. BIGELOW.

To Messrs. J. T. G. NICHOLS,
F. H. KREBS,
C. H. BURBANK.

A D D R E S S .

WHEN, after a protracted and prosperous voyage, the good ship has made the land, and is skirting along the familiar objects of the shore, the passengers elated with the prospect of a speedy release, the officers divested of anxiety, it is customary to devote an interval as now to an interchange of kindly feeling and of mutual good wishes. With your permission, I will endeavor to beguile our yet remaining minutes in attempting to convey to you my own impressions of the shore on which you are about to disembark, and something of the country beyond it. The history of late years has been instructive to those, who in pursuit of wealth, or of a new field of enterprise or distinction, have invaded an unknown territory, courageously but unadvisedly; without an adequate knowledge of the difficulties to be met; with enthusiasm, perhaps, and high aspiration, destined only to be wasted in misdirected effort or frittered in unprofitable industry.

Whether you are here in the fulfilment of a long cherished plan, the dream of earlier years, or whether by the trivial influence of some little circumstance you have been switched upon a new track in life, and whirled far from the scene of earlier associations; each of you is now bending earnest steps to a new field of labor, determined to convert his store of knowledge into a means of credita-

ble livelihood; to earn an honorable position in the place of his adoption, and perhaps distinction in the world of science.

No profession tends like ours, to confuse the different phases of worldly distinction; moral excellence, for example, with medical attainment; intellectual ability or cultivation, with success in business. Let me at the outset explode any lingering belief that what is usually called eminence in science, necessarily produces medical practice; or that large medical practice implies anything in respect of medical science. Inquire in any considerable metropolis for the physicians in extensive practice. You will hear some of their names for the first time. Ask about the practice of a man whose scientific name is a household word, and it is often inconsiderable. The qualities of a good practitioner need no encomium of mine. Far be it from me, even to seem to undervalue them. But I shall endeavor to show that the pursuit of medical science and the practice of medical art are often uncongenial occupations which lead the mind in different directions; and that a taste for science is on one side of and collateral to the qualities which ensure an extensive business. It is true that there is no absolute incompatibility in these pursuits. Hunter, indeed, left the dissecting-table unwillingly to seek the necessary guinea, but, on the other hand, practical study must have been a congenial occupation to the mind of Sir Astley Cooper. He himself told me that he rose at an early hour of the morning for this sort of work, digesting his morning studies while he afterwards visited his patients, and writing his results each evening. The names of Brodie and of Lawrence are equally familiar to us as reaping largely and early, in the field of science, while their medical practice was lucrative. In fact, the reputation which accrues from such distinction is justly more available than any other in in-

viting that confidence which in its turn leads to practice. But to develope and retain this practice, demands other qualities,—and I shall presently allude to them,—which of themselves may be sufficient to insure to some individual profoundly ignorant of common medical truths, an extensive business, never indeed of the best class, but among people more or less intelligent in other matters. And this is because one who possesses the practical and efficient industry alluded to, must in time, by a familiar intercourse with disease, acquire a certain rule of thumb appreciation of it.

Study is generally the chief occupation of earlier professional life, and if not at that period, never. It afterwards gives way gradually to practice; and this, perhaps, is the usual life of the physician. But the man who gives himself up to science is to that extent a recluse, impatient of interruption, while the exclusive practitioner has barely time to read the newspapers, much less the medical literature of the day.

In considering first the science, then the art of medicine, let us look for instruction, if there be any, not in the customary eulogy of an ideal excellence, but from such a consideration of our subject as might be suggested by observations of daily life. We are most of us charlatans when we are sick ourselves. It is rare that a sagacious, at once, and prejudiced man, dies like Spurzheim, proof to the last against the incantations of our art. Let us then embrace this moment, with our faculties yet undepleted by disease, the mind unclouded, and the eye tolerant of light, whether it be colorless as truth, or tinged if you prefer to call it so with scepticism, to view it for a short time, with a steady gaze; in its beauties, in its defects; not unmindful of the one, nor flattering ourselves in ignorance of the other.

It need not be urged that medicine is a composite sci-

ence, and that its advance is dependent, not only upon the knowledge of its immediate and intrinsic elements, of the symptoms of disease, of their usual sequences and combinations, of the appearances of diseased parts, but also upon that of Physiology, Anatomy and even Chemistry. To identify disease, we must know health. To repair the machine, we must understand its structure and its working. But the student of Physiology or Chemistry may insensibly wander far from the field of pathological research, absorbed or beguiled by endless and ever-varying phenomena, which are at each step less immediately applicable to his own peculiar science, especially to the details of his daily vocation. He becomes bewildered in the interpretation of equivocal appearances, and his mark may be effaced by the next wayfarer in the same direction. On the other hand, let him linger nearer home, and the paths are worn and barren. Earlier explorers have left little to reward his industry. The chiffonier in science, no matter how industrious, piles his basket with material of inconsiderable value.

Yet most of us must be content to accept one or the other of these alternatives. He who climbs the tree of knowledge either lingers among its larger and unproductive stems, or follows some inviting branch, in its divisions and subdivisions, till he finds himself far to one side of the main current of its life, perplexed in studying a handful of its ever sub-dividing fibres, and his sky darkened by the crowding foliage. It is reserved for the gigantic capacity of the few, to grasp, in one comprehensive glance, all its outspreading branches, from the single leaf to the massive trunk, in all the complexity of their relations; to discern the fruit and to garner the abundant harvest.

It should not be inferred that he who has earned the highest place by scientific acquisition, is most likely to make on that account a great discovery; remarkable

for its novelty and brilliancy, or for its utility. The cultivation of knowledge does not always seek direct utility, or immediate application, but sometimes only to extend the range of human comprehension, to enlarge the sphere of human intellect. Intellectual ability, in any direction, commands respect, whether like that of Leverrier, or our own Pierce, in a pursuit which lays up facts and developes knowledge which may be turned to use in sailing over or measuring the surface of the earth, or in weighing its atoms, or in adjusting the complicated curve of mechanism; or whether it is simply an exhibition of gigantic and unfruitful capacity like that of Morphy. It is, however, a mistaken zeal which would monopolize for the votaries of abstract science a large share in fashioning the material world to the direct comfort and welfare of the human race; which always points to the scientific pedigree, for example, of the safety lamp, as if it were not at every moment offset by the protean phases of India-rubber, or of the sewing machine, or yet even of a common apple-parer; all of the plebeian birth of art, but all intrinsically involving a more complicated mental combination.

Are you ambitious for the fame of a discoverer? The not untrodden paths which led to a knowledge of the circulation of the blood, of vaccination, of the properties of ether, and which will bear to a remote posterity the names attached to them, as they have already done to every corner of the civilized world, were open to the ordinary capacity, as well as to the ordinary cultivation of man. But beyond the requisite devotion or distortion of your daily life to an idea in the possible realization of which you believe, he who expects to draw the prize must have good fortune. In such lotteries there are many blanks. The distinction which the world concedes to an exertion, perhaps in no way commensurate with its great result, is

testimony to the rarity of such fruition, if not to its disproportionate reward. A witty friend of mine once said, that sweeping the sky for asteroids and comets was like sweeping the street for sixpences. A man might find one, but this good fortune does not explain why he should receive a silver medal also. We might almost dispute the justice of the lottery which seems sometimes to overlook the toil of cultivated genius to bestow a discovery of immense utility, on some importunate laborer, whose chief claim was, that he believed the prize was there, and that he was determined to possess it. The discovery of facts which promote the temporal welfare of our race, seems to be distributed in a way almost as arbitrary as the wealth which can command the comfort that grows out of them.

Again, a medical discovery may be made by some person of extravagant views in medicine, perhaps, on the whole, ignorant of disease and of its treatment, a man of one idea, whose life may be collectively of more harm than good to the community; and yet while the individual may be justly appraised and ranked by his contemporaries, or those who know him in all his qualities, his name attaching to the discovery is an abstraction which posterity and foreign nations may honor with unqualified distinction.

It is no part of my present purpose to subject any real or alleged medical discovery to a cynical and cold-blooded scrutiny, but rather to direct attention to the little that we may know or even care to know of an individual, of his life, or of his views of the rest of science, beyond his name; which stands as the barren and algebraic exponent of the recognition by the world of a received value.

Just fifteen hundred years ago, there lived a man of servile origin, who, his employment being mean, rendered it infamous. He was a worthless parasite; a vile informer; and then, a tyrant; each moment of whose reign was

polluted by cruelty and avarice; a plunderer of temples, and, it is said, a ravisher of women. "This odious stranger," says the historian,* "disguising every circumstance of time and place, assumed the mask of a martyr, a saint, and a christian hero; and the infamous George of Cappadocia has been transformed into the renowned St. George of England, the patron of arms, of chivalry, and" somewhat oddly "of the garter."

There is another phase of scientific fame of which we sometimes hear, approaching indeed much nearer to the solid substance of intellectual cultivation, of large and laborious acquisition. Men who have studied are tenacious of their so-called scientific reputation; which I suppose to mean, an acknowledgment by other men of similar pursuits of their degree of commendable attainment, and of the actual progress in knowledge they may have made. And yet you might occasionally suppose that there existed a monopoly of some nebulous and ill-defined variety of greatness among the votaries of physical science; a superiority of sentiment which conceded little to the energy, the wide-spreading contemporaneous knowledge of the merchant, for example, to the perfection which the practice of the law impresses on the higher intellectual machinery, or even to the statesman; while the investigator of a microscopic species or the finder of a new insect may expand at leisure and by right, within his mystic circle.

You will also hear of a pure and dispassionate atmosphere of science, remote from the conflict and struggle of busy life. Without insisting that our own National Medical Convention is its exclusive and peaceful asylum, I have yet to learn that we have reached that ideal stillness when the passionless form of truth is simultaneously contemplated by two naturalists, who have stumbled upon the

* Gibbon. Decline and Fall. Chap. 23.

same stone or fish or flower; or even, that it hovers around the mutually impinging tubes of any two astronomers.

The wisdom and excellence of the world is not vested wholly in those with whose names and reputation you are most familiar; nor can we suppose, that those of whom we know comparatively little, have been shut out from all participation in the divine gifts to man.

The noble character of a whole contemporaneous people is unwritten, save in the casual testimony of some visitor to a distant shore, where the race was not as yet demoralized and asphyxiated by the invading wave of new and uncongenial forms, some one whose own large intellect, whose sense of justice, and whose warm and generous impulses could elicit a like response from stoicism and reserve. We cannot suppose that Solomon monopolized the discretion of his generation, nor yet that Celsus, Galen or Hippocrates were the only and best family practitioners of their respective dates. There is a machinery to fame. It is one thing that a quality should exist, and another that it should come to be known. In civilized centres, talent and attainment generally make their mark; but sterling sound sense and excellent medical acquisition may be sown through every village in the land, unambitions and unobtrusive, while on the other hand, men upon whose medical judgment you might justly hesitate to rely, may by adventitious circumstance or a thirst for notoriety or gain, be urged into a really conspicuous position.

Briefly, then, immediate usefulness is but a collateral object in the pursuit of science in its higher aspects. We rather look to the exercise it gives the human intellect, and the field which it lays open for the progress of the mind. Science explores, points out the way, invades and annexes new districts, suggests their capabilities; and in their loftier and remoter regions much that you find may

be at present unproductive territory and only an addition to the domain of present knowledge; but soon the flood of living industry pours in, clusters about its most productive spots, and tills the soil or digs the gold.

Knowledge advances by slow and little steps; and the supervision of its progress is allotted among many individuals. The almost useless iodine; the curious collodion; the daguerreotype; the stereoscope, which conjures to your fireside the living apparition of every image created on this earth by God or man, and of whose future we do not yet dream; a common adhesive strap in the hands of a New Hampshire surgeon, and an apparatus of fracture extension for which no European potentate could at need command an equal substitute; the old familiar ether bottle on the shelf, and anæsthesia; all these are examples of this subdivision. Then let each contribute something. Utility does not demand great intellect; the gigantic feats of intellectual force do not ensure utility. The prizes fall to industry; and sometimes to a tenacious, I had almost said, insane pursuit by each of his own chimera.

But I hasten to the more attractive theme of art; of therapeutics and of daily life; the field of practice, where, in the imagination of the student, the laurel wreathes the surface and the gold embarrasses the soil.

Still referring you to the abounding annual harvest of medical introductory or valedictory literature for the reiterated inculcation of honorable motive and profound learning; and yielding to no one in a just appreciation of the importance of holding constantly in view a standard of attainable perfection, I shall venture, perhaps in humble imitation of those divines who seek instruction from the contemplation of man in his imperfect state, briefly to speak of medical practice as it sometimes is. And first, of the power of remedies; meaning, of course, that therapeutic region which is still open to discussion; with sedu-

lous respect, at the same time, for the fixed and imperishable boundaries of that large domain which therapeutic art has distinctly and forever subjugated.

This is neither the time nor place to heed the clamor of the benighted, no matter how honest, votaries of preposterous medical theories, who from their orbit in the outer darkness, cry, Lo! the whole science of medicine is yet imperfect; our special knowledge is yet imperfect; not the less is it a part of a true science. Let us, when it pleases us to do so, look at facts; and leave others, at their leisure, to distribute their consolatory syllogisms.

It was a singular reflection upon the life of some physicians of great eminence, fifty years ago, that their lives might have been, on the whole, productive of more harm than good, I do not say to the happiness, but to the physical welfare of their patients.

How is it that the treatment of disease has varied so widely from one epoch to another, and that diametrically opposing methods have been successively approved? How does it happen that inside of certain general limits, there is no fixed standard of therapeutic infallibility, or even excellence? Among physicians in large practice anywhere, who knows or cares exactly what are the therapeutic views of any one of them; whether he may deem it proper, during the progress of a typhoid fever, to administer a whole dispensatory, or whether he allows the patient to go on without remedial interference? One of these systems is the better, and if so, which, and why is the truth not hailed by acclamation?

Or let a middle therapeutic course be chosen, and let a medical jury of conceded weight and high position be selected, each to dictate, without the knowledge of the rest, some therapeutic course for a particular case. What a farrago should we have of calomel and opium, of gum-water and ptisans, of "favorite medical prescriptions," all possibly

compatible with the recovery of the patient, and some of them promoting it, but more of them unquestionably retarding it!

The therapeutics of England, of France, of Germany and of America, probably differ much more widely than the diseases do, not only among standard and written authorities, but still more among the mass of general practitioners; partly because one thing often does as well as another, both being superfluous and neither positively injurious; but also because even when there is a real necessity for active interference, the patient has no guarantee, beyond his own personal belief, that his physician shall either entertain or adhere to any standard views in science. In other walks of life, people can judge of work. In the other learned professions—for example, at the bar—there is a public tribunal where a standard of right is upheld and the advocate is tested; but the medical man both argues and adjudicates in private, being himself examining counsel, jury and judiciary, and the patient relies upon him alone. Suppose your roof should leak; and that a carpenter, when sent for, should make his diagnosis and then stop the hole; and that at another time, you should in like manner send for a different mechanical practitioner, who on hearing of the anasarca which pervades your house, should fumigate the entries and rub agreeable preparations on the walls, promising to call again next day. Even though the rain should then cease and your house be soon dry, there is no certainty that you would prefer the first inelegant prescriber, who merely stopped the leak. Thus it is that because people are not gratified themselves to be judges of a lesion, they must sometimes accept on faith, and be as well content with the one treatment as with the other.

Practice is business. Pardon me if I treat this somewhat homely subject in an informal manner. From Sir

Astley Cooper down to "Old Dr. Jacob Townsend," whatever else of truth or error, of honest and learned labor or of arrant deception may go with it, large practice cannot exist without industry and regularity and assiduity and long-winded steadiness of purpose; qualifications which give success, even though the scientific capital be limited, and which, strange as it may be, sometimes replace it. I do not speak of a scientific, nor of a desirable position in any sense; nor of the respect of educated men; nor of that of the intelligent world; but of a certain practice; and if in a metropolis, as large and possibly as lucrative as that which is attracted by the most popular medical fallacy, not to say nostrum of the day. A step further. Only throw overboard honesty; wholly abandon the truth; and the practitioner must have a singular want of business faculty, relating to a subject about which people know so little, and of which they need so much which fails of tolerable pecuniary success. In fact this is one of the few modes of getting money by unblushing false pretences, of which the law does not in the United States take cognizance.

Such medical practice may come quickly, but it also goes quickly. The weathercocks whose equilibrium is easily disturbed, will turn again at the next breath from any other quarter; and in this way the practice of pretenders and of the medically incompetent, tends, in various degrees, to that rapid rise, culmination and decline, which in all ages characterize the traffic in nostrums.

With honesty of character and purpose, there accrues a better sort of practice and one of more enduring nature; and although engrafted upon business habits, which have been already pointed out as necessary to it; and sometimes, even, mistaken for its chief essential, yet added to these, we may now observe a great variety of attributes conducing to the same end. Perhaps the practitioner

deceives himself. Does he believe himself successful, for example, in our autumnal fevers, which never stop for treatment, he is, as he is persuaded, engrossed with the disease in a hand to hand combat, in which victory rewards only superhuman efforts. Is he good for a chronic case, he is fertile in expedients, assiduous and long suffering. Among the higher qualities distinctly collateral to science, an acknowledged rectitude and firmness of general purpose, usually called character and principle, stand first; and then the social attributes, a ready and genial sympathy, good feeling, all in themselves essential or conducive to perfecting the obvious and intimate relations in which you stand to the members of the human family. Again, as collateral to medical knowledge we recognize as instruments of success, a cultivated intellect, force of will, some knowledge of the world, not in its objectionable sense, but rather a knowledge of what men want both at the time and on the whole; and with it a readiness to serve them, and an understanding how to do it; tact, or more largely, judgment, and so on without end.

Thus it is that practice accrues alike to the medical man in Paris, whose toil has lifted him to some lofty eminence, a man known mainly it may be as the occupant of a distinguished office, whose name is only an illustrious abstraction, to most of those who call for his professional services, and to the excellent physician of the country village, whose attractive helpmate may have won his practice, which may again be determined, even by the meeting-house he goes to.

The exclusive practitioner, whose only aspiration is to enlarge his daily round; who divides the world into two groups, the first his patients, and the second those who are not his patients; who watches like a shepherd over his own flock, and lest they should stray, gathers to his fold, as opportunity may offer, the lambs of other shep-

herds; who is always ready with a prescription, about which it has been well said, that in a community where great stress is laid on therapeutics, the comprehension of disease will be found to be in an inverse ratio, not only teaches a lesson in his fidelity and regularity, but something also of more importance. He perhaps appreciates the length of time nature sometimes requires to do her work, and just as the dial measures the passing hour, by tangible intervals of space, so he materializes, by the art of the apothecary, months of time, and pharmaceutically marks their daily progress. The epigastric tympany which so afflicts the maid of Erin chained to her laborious routine, or yet that evil demon of the sewing girl, the stitch begotten of the stitch, these are maladies rarely to be solaced by a blank three months of active exercise. But let some salutary discipline, alternately with therapeutic duties, beguile the tedious convalescence and justify improvement, while you inculcate the necessary diet and fresh air, and the dyspepsia and the spasm will forthwith abate. So in grave disease, when the excito-motors of the mind are polarized, when the sensibilities are tense and vibrating, people must do something commensurate with the occasion. The treatment of the patient is then in part the management of friends. The active inflammation demands depletion and evacuation, but equally the patient's mind, as well as that of the friends and sometimes of the neighbors must have a vent for capabilities pent up and condensed. All this we learn much of in following the daily rounds of the practitioner.

Thus we have learned a valuable lesson. But in addressing vicarious remedies to the mental for the physical system, let us not confound the two. There is need to discriminate and to separate what is done for the disease. For just as in a necessarily doubtful diagnosis a positive man will be right once in several cases, and the wrong

guesses will be forgotten both by himself and other people; so in therapeutics he who prescribes for everything, will, with nature on his side, so often see the patient getting well, that he will come inevitably to attach importance to his remedies. If it be necessary for the patient's welfare, to occupy his mind, let the practitioner not deceive himself in this respect, abandoning the scientific sense, and blunting the whole judgment. "You may talk in this manner," says Dr. Johnson, "it is a mode of talking in society; but do not think foolishly."

It should not be supposed that this current of remark can have any injurious tendency. No patient will believe it possible that he himself can come within this category, or if he concedes this point it is because he is a philosopher; and he will then thank us for any appropriate remedy for his ailments, whether bodily or mental.

Let us not deceive ourselves. Heaven knows that it is difficult, in any calling, to maintain the ideal equilibrium of perfect right. It was a pardonable confusion of professional ideas that once escaped an excellent friend of mine in the remark, "I cannot make this patient fewer visits, for my family needs all I earn." It was, on the other hand, a Spartan trait in one of the most unblushing but successful pill venders of his day, and one which shall preserve his name inviolate, that he could exclaim, "God forbid! Indeed I gain my money in that way, but no friend of mine shall take my pills!"

Few young men escape unscathed from the ordeal of a hospital life, or of a protracted attendance upon hospital service, at home or abroad, without having sacrificed to some extent, to the engrossing interest of a disease, their nicer appreciation of the claims of the individual. It is a paradox that a medical student, with a considerable medical knowledge laboriously acquired, may be yet not wholly qualified to deal with common and familiar cases

of disease; that he may have still something to learn, and something to unlearn: and yet it is so. He has hitherto treated disease. He is now to treat men and women. Let the young practitioner erect, upon the sound basis of thorough medical acquirement, something of the qualities which ensure success not only in the law, but in mercantile and in social life; and if he really desire it, if he determine to pursue to-morrow what he has begun to-day, he may in time acquire a practice of which his health and life will be the only measure.

In a successful specialty, organization, business faculty, equally vitalize medical proficiency. Specialties belong to large communities, or for a short time to smaller ones; and by arresting attention, may become the familiar engines of ignorance and empiricism. An educated man, by a successful specialty, may become a skilful one, in concentrating his sphere of observation, and enlarging his field of study. And yet the local disease occasionally then suffers, for the want of an adequate appreciation of its relations to the condition of the whole system. And another objection lies against the tendency of special studies to exaggerate particular lesions, and to protract a case with unnecessary treatment, without which the patient might do as well and perhaps better. How often is the probang officiously and uselessly intruded into the throat! You might suppose, of late years, that all the diseases of the viscera had finally entrenched themselves at the fauces and the os uteri, and that against these fortified recesses, the crusading knight (or nitrate) had sworn extermination.

Permit me to add here a word or two of promiscuous advice. Our time is brief, and I will not detain you with a reference to quackery, which is best let alone; for just as the soil accumulates after an interval, a certain element, out of which springs a fungous organization, which afterwards again gives place to sounder vegetation, so quackery is a

parasitic and perverted but a natural growth, drawing its food from the unsounder and exceptional organisms of every large community. Nor yet will I refer to your attitude towards patients, for nothing can be simpler than the observances commended in the last code of ethics of our American Medical Association, which advises physicians to "study in their deportment so to unite tenderness with firmness, and condescension with authority, as to inspire the minds of their patients with gratitude, respect and confidence." As this was printed in 1857, I can refer you to no later prescription to inspire these simultaneous emotions.

Do not think I have treated this whole subject either lightly or irreverently. Yourself the invalid, with what expectation do you anticipate the daily visit! The vaunted philosophy succumbs to each mysterious detail of alleviation, burthened with its indisputable logic. The tedious hour beguiled, the restless and perverted judgment satisfied, the irritable caprice soothed, the unstrung intellect harmonized, thus and then only can a master of his art guide you through the hour of danger, summoning to your aid the aggregated learning of ages of research, to fortify the frail tenement against the passing storm, and then, if need be, to repair it for your comfortable habitation.

In every department of medicine and surgery, there has been accumulated an incredible amount of sound and precise knowledge, which time cannot modify nor dissipate, bearing especially upon the exact character and usual tendencies of disease and injury, and amounting in the aggregate to a huge pile of which a common three years term of study can do hardly more than to investigate the large foundations.

In therapeutics there is a series of material agencies or remedies which, skilfully directed, arrest and neutralize

certain diseases, as if their co-existence in the human system were materially and mutually incompatible. These diseases can be cut short by skilful treatment. At the opposite extreme there lies a group of maladies, against which, intrinsically, art can do nothing; but which are usually associated with common febrile symptoms, with derangements of local mechanism which can be set right, or with suffering that can be more or less abated. Between these outside categories there lies an infinite variety of imperfect and perverted function, which may be generally influenced by skilful interference for the better, or by incompetent and solemn meddling for the worse. It would indeed be little loss if that system of prescription of which the Dispensatories are the exponents, were reduced in bulk by nineteen twentieths, but it would be equally a disastrous day for mankind if our actual accumulation of sound medical and surgical therapeutics were stricken from the page of human wisdom.

Go into the field, armed with a detailed and thorough knowledge of lesion and disease in all its phases; of surgical expedients; of the few specific remedies, and of their uses; of the miraculous power of air and exercise, and proper food; of the applicability and agency of stimulus; of local and general depletive measures; of applications cold and warm, stimulant and emollient; of counter-irritation; and perhaps of a dozen of the most efficient drugs not specifics. These are more than you will be likely to require for a considerable period and a common practice, and with them you will do as much service to your patients as you would be likely to effect with an entire apothecary's shop, and with prescriptions two inches and a half in length.

If I have been fortunate in clearly expressing my convictions, no one, for a moment, will suppose that the science of medicine necessarily or intrinsically involves

anything of unsoundness, or that its true practice is uncongenial to a straightforward simplicity of character. It would ill become one who is surrounded by the brightest examples of professional acquirement, in a medical community characterized, if by any eminence, by a high standard of honorable conduct, not only among the elder but among its rising members, to leave, by negligence or by imperfect statement, any false impressions of our true relations to our science, to each other or to the community. Equally unpardonable would it be, if in attempting to dispel the refracting atmosphere which hovers about our art, I should seem to imply that it is vulnerable to attacks from those who live by inculcating, whether honestly or fraudulently, the medical delusions of the day, and whose practice always aims at concealing their ignorance of the actual characters of disease, under a cloud of therapeutics.

If any conclusion has been especially elicited from the views which have been briefly presented to you, it will have struck you forcibly, that the public at large are wholly incapable of judging the relative merits of medical practitioners. They indeed may recognize some general distinctions, of prominent position, extensive practice, conceded eminence; they can identify the man who best persuades or satisfies them; to whom they may entrust themselves because of his general force and weight of character, or of his moral excellence, or of his fidelity, or it may be by a mere affinity, because they like him.

But at what tribunal accessible to the public does the physician testify to his scientific knowledge? In what healthy forum does he establish his medical opinions? What can the sick man know of his knowledge of disease? Shall he look at the condition of the ship which has survived the storm? I reply, that it is absurd to form an opinion of the merit of the physician by what you

may think to be his usual success in practice. Do you trust to his general good judgment in other matters? As well might you predicate the professional ability of the lawyer or of the merchant, on his possession of a tolerably well-balanced mind. If it is on the whole true, that no quality is more essential to sound medical practice than a sound judgment; it is still further true that an enlightened judgment is as necessary as an informed conscience; for if a man's convictions are based upon benighted or erroneous premises, it matters little that they are logical or honest. They might as well be those of a conscientious New Zealander as of a determined practitioner of medicine, so long as he feels it equally his duty to pursue a course which is conducive neither to your comfort or your safety.

The hygienic safety of the public lies in the sound and thorough education of the medical student; in the adequate support of medical schools; in seeing to it, that the best institutions of medical learning, each in its own community, shall be so far well nourished that they shall not dwindle and degenerate; but that they shall possess the vigor without which they cannot hold their way with the onward march of solid knowledge.

The question to the public is, will you admit within your confidence, to navigate the household ship in time of peril, responsible to no one but himself, with no eye of scrutiny upon him, one who, not knowing what the exact nature of the danger is, seeks to engross equally your mind and his own, by a routine of incessant effort, putting the helm first up, then down, and so compelling the good ship to struggle at once against the tempest and an officious, or, to say the least, a futile interference? Or will you rather rely upon one who undertakes to know, first, all that can be known, of the conditions of disease; and who then endeavors to discriminate among remedial mea-

tures, which are of sure, which are of probable, and which only are of possible salutary influence? The broad foundations of this ample structure must be laid, at an early period of life, in a sound medical education.

Our investigation ranges over a large area, embracing at one view the numberless expedients of art, and the broadest generalizations of abstract science. Chemistry and Physiology, the science of the atom and of the cell, is each spread out, even beyond the grasp of any single human intellect. The deviations of Pathology have as significant a bearing upon physical life in its perfection, as the aberration of a planet or an asteroid upon the laws of gravitation.

But it is also ours to claim a daily usefulness, compared with which the province of an abstract science is but a gymnastic of the brain; and of which the actual measure is within the knowledge and the intimate experience of every member of a civilized community.

Let us avow with pride that our lot has been cast among a people sensible to the importance both of science and of art. If their just munificence has testified to a high estimate of one whose reputation is known wherever science has been cultivated, whose capacious intellect and whose genial temper are familiar to us all, and who has deserved largely of our own community in opening attractive and new paths in natural science, where the expanding intellect may gain health and vigor, and by which the boundaries of human knowledge have been borne onward and extended; if the claims of science have been listened to; an equal liberality is at this very time responding to the exigencies of our own art, at the appeal of one who knows its actual requirements, the honored patriarch of our noble calling; himself ever a bright example of its learning and its virtues, whose right is undisputed whether to sway the judgment or to lead the hearts of the community; whose

elevating influence radiates both from his own and from a transmitted excellence, briefly though it shone amongst us.

Let us emulate this doubly bright example, and cherishing a memory identified with all the more exalted aspects of the healing art, let this our institution bear within its walls, to a remote posterity, his name, joined to that other, which ever kindles all our loyalty and our affection, and whose undimmed escutcheon is this day entrusted to your care.